WANT OF AN EFFICIENT SURVEYING ESTABLISHMENT IN CEYLON, AND THE EVILS RESULTING THEREFROM.

No time ought to be lost by the home authorities in sending out a sufficient number of young men who are conversant with land-surveying and tracing of roads through a difficult country, as well as possessing skill to make roads when a trace has been determined on. I am aware that the want of such persons is most severely felt in the island. I know of applicants being unable to have land surveyed for more than two years, entailing almost ruin on them; and the reply of the island authorities to complaints made on the subject was, that they had no surveyors to survey lands or trace roads, although people were ready to pay any sum which the Government might demand for their services; and that their repeated applications to the home authorities for surveyors were not attended to. Thousands of persons can be had in England too glad to be employed by Government, possessing the skill I mention; and their employment at a salary of suppose 200*l.* per annum, as surveyors in Ceylon, to the number of at least twenty, so far from entailing an expense on the Government, would, I am convinced, afford a profit, so highly would the planters pay for their services. In proof of my assertion, I may mentinn that I know of many who gladly paid to surveyors ten guineas per mile for merely pointing out a trace, which, in many instances, proved to be any thing but the best which could be determined nn. The establishment of the Surveyor-General is acknowledged to be one of the most inefficient in the island; Mr. Norris's own exertions unassisted can, of course, do little. Another argument to be used to induce Government to send out an effectual establishment of surveyors is to be found in the fact, that Government has in more than one instance sold the same land to two purchasers; and to guard against the dangers to which similar acts would subject them, the island Parliament has had recourse to legislation to guard themselves against the consequences to which they were liable in having sold the same land to two different parties, and received payment of it from both.—*Extract from a Letter addressed to Lord Stanley, Secretary of State for the Colonies.*

ON THE RESISTANCE OF RAILWAY TRAINS.

A paper, by J. Scott Russell, Esq., on the above important subject, was read at the late scientific meeting at York; the substance of which, very much compressed, will be found in the following experiments made by the author on the Sheffield and Manchester Railway:—

1. Trains of carriages, empty, were put in motion at the summit of an inclined plane, at about 30 miles an hour, and were allowed to descend freely. 2. Trains of carriages, loaded, were tried in the same way. 3. The engine and tender were treated in the same way, being put to a velocity of between 30 and 40 miles per hour, and allowed to descend freely the whole length of the inclined plain without any train attached. 4. The engine and tender, with a train attached, were propelled to the top of the inclined plain, and then allowed to descend freely by gravity.

By these means the following results were obtained:—

1. The resistance to railway carriages at slow velocities does not exceed 8 lb. per ton. 2. The resistance to a light railway train of six carriages, at 23·6 miles an hour, was 19 lb. per ton. 3. The resistance to a loaded train of six carriages, at 30 miles an hour, was 19 lb. per ton. 4. The resistance to a light train of six carriages, at 28 miles an hour, was 22 lb. per ton. 5. The resistance to a loaded train of six carriages, at 36 miles an hour, was 22 lb. per ton. 6. The resistance to a six-wheeled engine and tender, at 23·6 miles an hour, was 19 lb. per ton. 7. The resistance to a six-wheeled engine and tender, at 28·3 miles an hour, was 22 lb. per ton. 8. The resistance to a train composed of six light carriages, with engine and tender, at 32 miles an hour, was 22 lb. per ton. 9. The resistance to a train composed of nine loaded carriages, with engine and tender, at 36 miles an hour, was 22 lb.

Mr. Russell observed, that the subject was of considerable importance, inasmuch as the system adopted for laying down the gradients of new lines was of necessity regulated chiefly by the opinion of the engineer on the question of resistance. How much mechanical force is required to move a given weight of train, along a given gradient, at a given speed, was a question of which the solution was essential to sound engineering; but the profession had long felt that they were not in possession of sufficient data to determine this question.

Correspondence.

BAD SPECULATION BUILDING.

TO THE EDITOR OF THE BUILDER.

Sir,—The construction of the early habitations of mankind required little skill, and as little knowledge, and I think if any person were to attend and see the infamous works now being executed in the road leading from Battle-bridge (called the Chalk-road) they would say that neither one nor the other ever entered the mind of those who are erecting such wretched buildings. What, Sir, can the district-surveyor be about? I would call his attention to some of *the party-walls* where *bond timber is placed side by side in a 9-inch wall.* I need hardly say that it is quite contrary to Act of Parliament, and in case of fire dangerous; in fact, Sir, I consider such building to be an imposition upon the public. The walls are built of the veriest rubbish, they are covered over, and the house is beautified, and, *to all appearance*, one would say well-built. A person purchases, and after being in possession for a few years, he finds the beauty fade, and the carcase rotten, and he has been imposed upon.

I hope the new bill will put a stop to all such work. I am, Sir, yours obediently,

Nov. 7, 1844. Dædalus.

WINCHESTER NEW CHURCH.

Sir,—Allow me to contradict an assertion made by "A Surveyor and Looker-On," viz.: that the drawings submitted by me for the new church at Winchester are the property of Messrs. Elmslie and Co., a firm with which I have not the honour to be acquainted, such assertion being perfectly erroneous and without foundation.

His remarks are evidently malicious; but this I can readily attribute to the sourness of the grapes.

Yours most obediently,

William Webbe, Architect.

Camden Town, Wednesday,
Nov. 7, 1844.

Removal of two Brick Houses.—A block of two brick houses in Lincoln-street, three stories high, was safely and successfully removed this morning ten feet and six inches from their old foundations to the rear. This novel work was accomplished on a plan furnished to Alderman Preston, a member of the committee for widening streets, by Mr. Moses Parker, who is justly entitled to great credit for the entire success of the new enterprise. The *modus operandi* was thus: concave cast-iron plates are prepared, the foundation of the wall cut away, and two plates facing each other inserted, with cannon balls between them. These plates and balls being placed under all the walls, the whole building rests upon them. Three screws are applied, and the whole building is rolled upon them any desired distance. These plates and balls are moved one by one, and the brick replaced, and the building left in the original state, without any injury to the structure. It is estimated that this block weighs 7,000 tons, and was rolled on 120 balls, and accomplished, after the plates were set, in about two hours' time.—*Boston Paper.*

A part of the tall chimney of Mr. Gill's alkali works at South Down, near Millbrook, was blown down on Wednesday night last. The chimney was 160 feet high, and was warped from the perpeodicular, owing, we have been informed, to the unequal contraction of the mortar when drying up; the top, we understand, overhung the base several feet. Fortunately the chimney was situated in the middle of the field, the smoke being conducted to it by subterranean flues, and no injury was therefore done to the works, to life, or property, by the fall.—*West of England Conservative.*

Miscellanea.

Yorkshire Architectural Society.—The general annual meeting of the Yorkshire Architectural Society was held in the Society's Museum, Minster Yard, York, on Thursday, October 24th, the venerable Archdeacon Wilberforce in the chair. The report was read by the Rev. J. Sharp, one of the secretaries, from which it appeared that several of the works which had been aided by grants from the society were entirely or nearly completed. Among these may be mentioned the stained-glass in some of the windows of All Saints' Church, in York, and the windows of the noble decorated church of Patrington. The formation of local committees throughout the county was strongly recommended, in order to advance the study of ecclesiastical architecture, and it was stated that of the committees already formed, only two—viz. Wakefield and Beverley—had shown any fruits of their labours. Twenty new members have been admitted during the past year. The report was adopted and ordered to be printed. Notices were given that at the next quarterly meeting, to be held in January next, grants would be moved for the church of St. Mary, at Bridlington, and St. Sampson's, at York. After the reading of the report, two very interesting papers were read—one by the Rev. W. H. Teale, vicar of Roystone, on the church of St. John Baptist, at Sedburgh. This church, which has been lately erected, is one of exceedioq beauty, and quite a model for modern church-builders. The other paper, which was communicated by a member of the Cambridge Camden Society, was read by the Rev. Thos. Egerton. The subject of it was Arthury Church, in Cheshire, which, from its very singular form, has given rise to a good deal of discussion on the part of Ecclesiologists. The church has been built at different times, the present north aisle having been the whole of the original church, the tower standing at the north-western corner. A nave and south aisle have been added of somewhat later date, the nave being wider at its western than at its eastern extremity, apparently with the intention of altering the orientation of the church, the patron saint having been altered at the time the addition was made to the church. The meeting went off very satisfactorily, and we are happy to find that the society appears in so flourishing a condition.—*Doncaster Gazette.*

Possibility of Large Stone Arches.—Mr. Rennie is of opinion, that with our strong magnesian limestones and hard granites, arches of larger span than any hitherto built may be safely constructed. There are numerous examples, both in ancient and modern times, of very large arches—the bridge of Narni, in Italy, of Velle Brioude, in France, and of Alcantara, in Spain, by the ancients, and those of Gignac and Castel Vecchio, by the middle ages; but the most remarkable example of cylindrical vaulting (the remains of which still exist) is the bridge of Trezzo, over the Adda, in the Milanese. The span is 251 feet over the chord, and 266 feet over the semicircle. The stone beams in the church of the Jesuits at Nismes, and those between the towers of Lincoln Cathedral—the former equal to the segment of an arch of 565 feet span, and the latter to one of 262 feet span—prove how much can be done with materials of small dimensions. In modern times there are examples of bold vaulting in France, in the bridges of Neuilly, Mantes, St. Maixence, and Jena; in Italy, in the Ponte Sta. Trinita, Turin; in England and Wales, in the bridges of Llanrwst, of Pont-y-tu-Prydd, of Gloucester, of Chester, and those of London and Waterloo over the Thames; independently of numerous arches and viaducts, more recently erected for the use of railways. The radii of curvature of the centre arch of new London bridge, taken near the vertex, would equal in boldness an arch of 333 feet; and the length of the key-stone, at 4 feet 2 inches, would make the depth only $\frac{1}{80}$th of the whole span.

Date of the Arch.—Mr. Hoskins is of opinion that arches were constructed long anterior to the time of the Ptolemies; for in the pyramids of Ghebel Birkel and Dunkalie, which are of more ancient date, both round and pointed stone arches were discovered.

For info on OCR and PDF Compression visit our website